

## OBITUARY

JOHN ROBERT BOOKER, AO, B.Sc., Ph.D., D.Eng., FIEAust., FAA



John Robert Booker was widely regarded as one of the finest researchers of his generation working in the field of theoretical Geomechanics. It was his supreme skill in devising rigorous theoretical solutions to many important but difficult practical problems that set John apart, and also underpinned the research of the geotechnical group at the University of Sydney, Australia for many years. His solutions to these problems were both elegant and accessible; they are used widely in engineering practice. The inspired analysis he developed to obtain these solutions usually contained a special piece of magic, often placed just before the final step.

Throughout his career, John produced an enormous body of important published research in over 250 technical papers. His output in a shortened lifetime was more than many top academics in the field produce in much longer careers. He authored and co-authored many seminal papers in the fields of soil mechanics, foundation engineering and environmental geomechanics. His major interests included development and application of analytical and computer solutions to bearing capacity problems, soil-structure interaction, consolidation, creep, thermomechanical behaviour of soil and rock, and contaminant transport in soil and fractured rock. He is a co-author of the influential book on *Clayey Barrier Systems for Waste Disposal Facilities*. He was awarded a higher doctorate (D.Eng.) in 1983 for his *Selected Papers on Analytic Geomechanics*.

John's work was always of the highest calibre and was recognized in a variety of important ways, both nationally and internationally. He received many prestigious awards and distinctions,

including the Medal for Distinguished Contributions to Geomechanics awarded by the International Association of Computer Methods and Advances in Geomechanics in 1994, and an invitation to present the E.H. Davis Memorial Lecture to the Australian Geomechanics Society in 1995. In recognition of his distinguished research in Geomechanics, he was granted an Australian Research Council Special Investigator Award in 1995. In 1995 he was elected as a Fellow of the Australian Academy of Science, a rare achievement for an engineering academic. In 1977, John was appointed an Officer of the Order of Australia, for his life-long services to Geomechanics and Education; a particular distinction that was unexpected by this private man of genuine modesty.

While he felt honoured and proud to receive the awards and recognition that came to him, John didn't seek them and he didn't place undue importance on them. Indeed, he found little need for public affirmation. He once said that what really mattered to him was that he had the respect of his peers and the people for whom he cared. He had that in abundant measure.

John embraced and epitomized the idea that fundamental theory and practical engineering are symbiotically related, as both are important components for the solution of complex technological problems. While regarded as one of the pre-eminent academic researchers in civil engineering, John's advice on many practical engineering problems was often sought by the engineering profession. In particular, he was a regular advisor to Coffey Partners International, a major Australian geotechnical consulting company. He was also a Fellow of the Institution of Engineers, Australia.

John spent his early childhood in Sydney, and it was clear from the memories he often recounted that his was a very happy childhood, and that he was much loved by his parents, Jack and Joan. He attended Chatswood Primary School until the family moved to Wollongong in 1952. There he attended Wollongong High School, where his real talent and flair for mathematics began to blossom. He achieved one of the top passes in the New South Wales Leaving Certification in 1959.

John arrived at the University of Sydney in 1960 armed with a cadetship from the N.S.W. Department of Main Roads. His initial aim was to graduate with a degree in Civil Engineering, but this was later modified when his abiding interest in mathematics took over, and instead, he completed an Honours degree in Science, majoring in mathematics. He was strongly attracted to applied mathematics, and so it was only natural that after he graduated in Science he should return to his first choice, Engineering.

Well aware of his prodigious talents, John felt a great responsibility to apply them wisely. He saw no need to complete another undergraduate degree. He knew then that research was what he loved best, what he wanted to do most, and where he could have greatest impact. He undertook Ph.D. studies in Civil Engineering at the University of Sydney under the supervision of the late Professor Ted Davis.

After his Ph.D. studies, John moved quickly through the academic ranks and was appointed as a Reader, and subsequently to a personal chair in Engineering Mechanics at the University of Sydney in 1985. As well as appointments at the University of Sydney, John was also a Senior Fulbright Scholar at the University of California at Berkeley, and held Visiting Research Fellowships at Kings' College London, Cambridge University and the University of Western Ontario. From 1989 to 1994, he served as Head of the School of Civil and Mining Engineering at the University of Sydney, and from 1990 he was Pro-Dean of the Faculty of Engineering. He stood on a variety of important committees at the University of Sydney, serving the academic community unselfishly and well, bringing important insight, great common sense, and an infectious sense of humour to all such activities.

John possessed a wonderfully wicked sense of humour. He was forever inventing clever lines for the amusement of his family and friends, and he often used humour to great effect to break tense situations. The jokes were often on him, and always the message in John's humour was not to take oneself too seriously.

All who came into close contact with him acknowledged John as a wonderful friend and colleague. John always supported and encouraged his students and colleagues, not only in their professional careers but also in their personal lives. He provided the model for mentoring and for caring. He was forever caring. For the last few years of his life he was a committee member of the Colostomy Association in New South Wales, providing support for others and helping them with their own difficult experiences. All this, while he himself was battling with cancer.

His gentle approach to all people could be seen in his role as a father. He never seemed to instruct his children. He was not didactic and he never badgered. He simply set the example by his own behaviour and attitudes. He impressed his colleagues by his amazing productivity, while also finding so much time for the family he loved so dearly. John always placed his family first in his life; he simply adored them. He loved and treated children as equals; he himself possessed many soft and child-like qualities.

John has left an amazingly rich legacy to engineering and academia. The large number of John's former students who are now in academia and high level positions, both in Australia and abroad, is testament to his legacy. He and his work have had a tremendous influence on the education and development of a large number of individuals who have spread John's philosophy, thoughts, approach and wisdom to many others. He has inspired, and will continue to inspire many individuals, all over the world.

John was a founding leader and Vice President of the International Association for Computer Methods and Advances in Geomechanics. His support and participation have been vital for the international status and success of this Association.

John supported and contributed consistently to the *International Journal for Numerical and Analytical Methods in Geomechanics* from its very inception, about two decades ago. He was a co-editor of the journal and with his colleagues contributed one of the highest number of papers, all of outstanding quality. He co-edited a series of special issues of the journal on the important area of Geoenvironmental Engineering. The success and eminence of this journal owe much to John Booker's contributions, participation and unflinching support.

John Booker was born in Sydney on the 24th of July, 1942 and he died peacefully in a Sydney hospital on the 13th of January, 1998, after a long and courageously fought battle against cancer. He was a warm, friendly, caring man who touched many lives and he leaves behind only admirers. He is survived by his wife Liz, daughters Katie and Lucie, sister Judy and mother Joan.

The Indian scripture Bhagwadgita says:

*"The soul or atman cannot be killed by weapons, burned or dried; it is imperishable and eternal."*

John Booker's work, friendship and memory will remain with us all eternally.

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